

We claim:

1. A data communication system, comprising:
a two-conductor medium;
a plurality of transceivers; and
sets of filters wherein the filters of each set are configured to define
5 a respective communication channel over said medium and
 are coupled to said medium in respective transceivers;
said transceivers thereby enabled to communicate data signals over
 the respective communication channels of said sets.
2. The system of claim 1, wherein:
each of said transceivers includes an amplifier and a pair of said
 sets;
one of said pair is a receive set that is coupled to said medium to
5 receive said data signals; and
the other of said pair is a transmit set that is coupled to said
 medium by said amplifier to transmit said data signals.
3. The system of claim 2, wherein each of said transceivers further
includes a combiner that couples said transmit set to said amplifier.
4. The system of claim 1, wherein the filters of each of said sets have
a passband that defines that set's respective communication channel.
5. The system of claim 3, wherein said passband lies in the
frequency region below 1000 megahertz.
6. The system of claim 3, wherein said passband has a width that
does not substantially exceed 10 megahertz.
7. The system of claim 1, wherein said two-conductor medium is a
coaxial cable.
8. The system of claim 1, wherein said two-conductor medium is a
twisted pair.

9. The system of claim 1, wherein said medium comprises a plurality of medium branches and further including at least one hub transceiver that couples said branches together and amplifies said data signals.

10. A communication system for communicating data signals over a plurality of different communication channels, comprising:

a two-conductor medium; and

a plurality of transceivers that each include:

5 a) a receiver which has a group of receive filters coupled to receive data signals from said medium; and

 b) a transmitter which has a group of transmit filters and an amplifier coupled to transmit data signals from said transmit filters to said medium;

10 wherein said receive and transmit filters have passbands that are positioned to define said different communication channels.

11. The system of claim 10, wherein said passbands lie in the frequency region below 1000 megahertz.

12. The system of claim 11, wherein said passbands have widths that do not substantially exceed 10 megahertz.

13. The system of claim 10, wherein said two-conductor medium is a coaxial cable.

14. The system of claim 10, wherein said two-conductor medium is a twisted pair.

15. The system of claim 10, wherein the transmitter of each of said transceivers further includes a combiner that couples said transmit filters to said amplifier.

16. The system of claim 10, wherein said medium comprises a plurality of medium branches and further including at least one hub transceiver that couples said branches together and amplifies said data

signals.

17. A data communication system for communicating data signals, comprising:

a coaxial cable network;

5 sets of filters that have passbands that define respective
communication channels in the frequency region below 1000
megahertz; and

a plurality of transceivers that each include;

10 a) a receiver that has a filter of each of said sets coupled
to said cable network to receive said data signals;
and

b) a transmitter that has an amplifier and a filter of each
of said sets that is coupled by said amplifier to said
cable network to transmit said data signals;

15 said transceivers thereby enabled to communicate said data signals
over the respective communication channels of said sets.

18. The system of claim 17, wherein said cable network forms cable
branches and further including at least one hub transceiver that couples
said cable branches together and amplifies said data signals.

19. The system of claim 17, wherein said passbands have widths
that do not substantially exceed 10 megahertz.

20. A method of communicating data signals, comprising the steps
of:

5 transmitting data signals to a two-conductor medium through
transmit filters whose passbands define respective and
different communication channels in the frequency region
below 1000 megahertz; and

receiving data signals from said medium through a plurality of
receive filters whose passbands substantially match
respective ones of said transmit filters.

21. The method of claim 20, further including the step of amplifying said data signals prior to said transmitting step.

22. The method of claim 20, wherein said two-conductor medium is a cable network that forms cable branches and further including the step of amplifying said data signals as they pass between said cable branches.

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